

February 10, 2009



Talking Points for Hib Disease and Hib Vaccine

Michigan Department of Community Health

Bureau of Epidemiology, Division of Immunization

Background on Minnesota cases of invasive Hib disease:

- In 2008, five children under 5 years of age were reported to the Minnesota Department of Health with invasive *Haemophilus influenzae* type b (Hib) disease; one died. Only one of the children had completed the primary Hib immunization series; three had received no doses of Hib-containing vaccine.
 - The five Hib cases are the largest number among children under 5 years of age reported from Minnesota since 1992.
 - The cases occurred during a Hib vaccine recall and a continuing nationwide shortage that began in December 2007. The recall of certain lots of the two Hib-containing vaccines manufactured by Merck & Co., Inc. (West Point, Pennsylvania) and cessation of production of both vaccines left only one manufacturer of Hib vaccine in the United States (Sanofi Pasteur, Swiftwater, Pennsylvania). In response, CDC recommended that health-care providers defer the routine 12--15 month booster dose for children not at increased risk for Hib disease. CDC also emphasized that all children should complete the primary series with available Hib-containing vaccines.
 - However, Minnesota vaccination data indicate that primary Hib series coverage was lower during 2008 than coverage with other vaccines administered at the same ages and lower than Hib coverage in previous years. Increases in Hib cases like the one in Minnesota do not appear to have occurred in other states.
 - The increase highlights the need to ensure that all children complete the primary Hib immunization series. Additional investigation to better elucidate the factors that led to these cases is being conducted by CDC.
- **Factors to consider:**
 - Invasive Hib disease in a completely vaccinated infant is uncommon.
 - More than 95% of infants will develop protective antibody levels after a primary series of two or three doses of Hib-containing vaccines.
 - Vaccine shortage is causing a decrease in the primary Hib series coverage levels in Michigan
 - As of 1/22/09, a review of Hib vaccine coverage levels in MCIR for infants 7 to 11 months of age demonstrates that we are missing opportunities to give infants their complete primary series of Hib vaccine.
 - Only 55.7% of children had received 3 or more doses of Hib vaccine, compared to
 - 68.8% of children in this age group had received 3 or more doses of DTaP and 65.7% of children in this age group had been given 3 or more doses of PCV7
 - The range of coverage for counties was 25.6% to 75% for 3 or more doses of Hib vaccine

- Concern of possible increased carriage and transmission of Hib disease with fewer Hib doses
 - Studies have demonstrated the presence of asymptomatic carriage of Hib
 - A three-dose primary series of Hib vaccine offers protection to the individual
 - A Hib booster dose contributes to herd immunity
 - Carriage studies will be conducted in Minnesota and Georgia to determine if the deferral of the booster dose of Hib, along with a reduced uptake of the third dose of Hib vaccine promotes more carriage and disease transmission.
- Concerns about parent refusal of vaccination resulting in unimmunized children

Hib Disease

- This serious disease has been uncommon since routine use of Hib vaccine began over 15 years ago. Before widespread use of the vaccine, Hib disease struck over 20,000 children per year in the U.S. Although Hib bacteria normally circulate in the community, the current conditions are jeopardizing the cushion of protection high immunization coverage provides, making babies even more vulnerable.
- *H. influenzae* type b (Hib) was the leading cause of bacterial meningitis and other invasive bacterial disease among children younger than 5 years of age. As recently as the mid-1980s, it struck one child out of every 200 in that age group. About 1 in 4 of these children suffered permanent brain damage, and about 1 in 20 died. Nearly all Hib infections occurred among children younger than 5 years of age, and approximately two-thirds of all cases occurred among children younger than 18 months of age.
- Invasive disease caused by *H. influenzae* type b can affect many organ systems. The most common types of invasive disease are meningitis, epiglottitis, pneumonia, arthritis, and cellulitis.
- Report all cases of invasive Hib disease to local health departments

Hib Vaccine

- Have an adequate private and VFC vaccine supply to complete the primary series for all children. Stock enough ActHib and Pentacel vaccine to assure protection from Hib.
- With the currently available vaccine, babies should receive three doses of available Sanofi Hib vaccine following the recommended schedule at 2, 4, and 6 months of age.
- **There should be no child deferred for a primary series dose or catch-up dose. There is ample supply of Hib-containing products.**
- Any provider who is having a problem with their private supply of Hib should contact their state or local health department.
- Due to the shortage, the booster dose normally received at age 12-15 months can be safely deferred, except for children at high risk, such as those children with sickle-cell disease, leukemia, HIV and other immune system problems, no spleen, or American Indian/Alaska Native children.

- Older children (up to age 5 years) who did not start or complete the primary series of Hib vaccine during infancy should be vaccinated. They can now be protected with fewer doses.

For more information on Hib and Hib-containing vaccines, go to the Michigan Department of Community Health website at www.michigan.gov/immunize and look under Provider Information materials. **Handouts for Use in Providers' Offices** include:

- An Important Update on Hib Disease and Hib Vaccine
 - Tips for Medical Offices When Starting to Use Pentacel During the Hib Shortage
 - Updated Hib Interim Vaccination Schedule
 - Quick Reference to Using Combination Vaccines
 - Always Reconstitute Vaccines with the Correct Diluent
- Recall children who are missing any primary series doses. Providers should check MCIR and monitor coverage levels in MCIR. Parents should check with their child's healthcare provider.
 - For more information on using MCIR to recall children missing doses of vaccines go to the MCIR website at www.mcir.org
 - Look for the Reminder/Recall manual under provider training materials. Contact information for MCIR regional offices can be found here too.
 - Encourage parents who have refused vaccine to reconsider their decision. Provide information about Hib disease and Hib vaccine safety. Document when a parent refuses vaccines in the medical record. Forms to document refusal can be found in the childhood section of the AIM Provider tool kit and www.aimtoolkit.org